

INTERNATIONAL BACCALAUREATE PROGRAM

The International Baccalaureate Organization's (IBO) Diploma Program, created in 1968, is a demanding pre-university course of study that leads to external examinations. The IB Diploma program is a comprehensive two-year international curriculum, with the aim that students share an academic experience that emphasizes critical thinking, intercultural understanding and exposure to a variety of points of view. It is designed for highly motivated secondary school students who wish to challenge themselves to a greater degree and become highly involved with the community. The IBO has earned a reputation for rigorous assessment, giving successful IB students access to the world's leading universities.

AISR students may take either the full Diploma Program, or they may attempt to earn IB Certificates in a few of their strongest subjects. A full Diploma requires studying six core subjects in the sciences and humanities concurrently, one each from the following groups: Language A, a second Language (B), Individuals and Societies (History), Experimental Sciences, Mathematics and Visual Arts/Electives. Three courses are taken at Higher Level and three at Standard Level. In addition, all Diploma Candidates must fulfill the core requirements mentioned in the section **Unique Characteristics of the IB** (see below). At AISR, virtually all of our 11th and 12th grade students take at least one IB class, and a majority of students attempt the full Diploma.

Unique Characteristics of the IB

The IB program offers special features in addition to the traditional strengths of a liberal arts curriculum.

Theory of Knowledge - TOK is a required interdisciplinary course intended to stimulate critical reflection upon the knowledge and experience gained inside and outside the classroom. It challenges students to question the basis of knowledge, to be aware of subjective and ideological biases, and to develop a personal mode of thought based on analysis of evidence expressed in rational argument. The key element in the IBO's educational philosophy, Theory of Knowledge seeks to develop a coherent approach to learning that transcends and unifies the academic subjects and encourages appreciation of other cultural perspectives.

Creativity, Action, Service - Known by its acronym **CAS**, this element is fundamental to the diploma curriculum. The CAS requirement takes seriously the importance of life outside the world of scholarship, providing a refreshing counterbalance to the academic self-absorption some may feel within a demanding school program. Participation in theater production, sports, and community service activities encourages young people to share their energies and special talents while developing awareness, concern and the ability to work cooperatively with others. The goal of educating the whole person and fostering a more compassionate citizenry comes alive in an immediate way when students reach beyond themselves and their books. This element of the IB Diploma Program is so valuable that we have made participation a graduation requirement at AISR.

Extended Essay - Diploma candidates are required to undertake original research and write an extended essay of some 4,000 words. This project offers the opportunity to investigate a topic of special interest and acquaints students with the kind of independent research and writing skills expected at university. There are currently 60 subjects, including more than 35 languages, in which the essay may be written.

Assessment - **Although** there are components for internal assessment at all levels and within all IB courses, IB is primarily an externally assessed program. Just as IB provides course content and structure, IB also grades the results at the end of the two-year program. Students at AISR are graded alongside other students in IB schools all over the world. IB Examiners, not teachers, mark the examination scripts. Each subject is graded on a 1 (lowest) to 7 (highest) scale. Generally speaking, in order to receive a Diploma, a student must receive a minimum of 24 points. There are cases in which 24 points will not result in the awarding of the Diploma. It is possible to receive 45 points (the maximum), but most candidates achieve between 26 and 33 points.

It is important to note that each student also earns a separate AISR grade evaluated by the teacher, that is independent from the IBO assessment. These grades, which are what the student sees on the Report Card each term, apply towards the earning of credits necessary to fulfill graduation requirements and receive the AISR U.S. High School diploma. A student may not achieve the IB Diploma and still have enough credits/passing grades to graduate and receive the AISR U.S High School diploma.

For more detailed information, please read the *Handbook for the International Baccalaureate Programme at AISR* or seek advice from the IB Coordinator, Counselor and Teaching Staff.

LANGUAGE A1 - ENGLISH

IB English SL/HL I and II

Grade Levels: 11th and 12th

Prerequisite: Teacher recommendation, or IB diploma/certificate candidate

Credit: 1 per year

Exploring literature to develop and express a deeper understanding of the human condition is the primary focus of this class. Application of a variety of world literature texts helps students relate to the common themes of man's struggle with himself and nature. The process of developing the expository essay is emphasized along with the development of both oral and written commentaries. Fine tuned rubrics are used to determine the students' powers of expression and ability to intuit multiple levels of meaning. There are two levels of the International Baccalaureate class for fluent (to near fluent) speakers of English. The Higher Level class covers fifteen texts while the Standard Level requires the study of eleven texts. The syllabus is divided into four sections: World Literature, Works in Detail, Groups of Works and School's Own Choices. Informal assessment takes place throughout the first year in preparation for the formal outside assessment imposed in the second year by the International Baccalaureate Organization. The four sections of the syllabus predetermine the type of assessment used; The World Literature section is assessed through two formal expository essays. The literature in the Detailed Study section is assessed through a formal oral commentary. The Genre section is assessed through a written exam. Lastly, the Free Choice selection of literature is assessed through oral narrative.

English A1 IB texts for years one and two are limited to the following titles: *Antigone*, *The Lost Honor of Katharine Blum*, *One Day in the Life of Ivan Denisovich*, *Hamlet*, *Macbeth*, *A Room With a View*, *Their Eyes Were Watching God*, *Ceremony*, *Chronicle of a Death Foretold*, *A Handmaid's Tale*, *Like Water for Chocolate*, *1984*, *Things Fall Apart*, as well as a selection of short stories and poetry.

LANGUAGE B - FOREIGN LANGUAGES

Dutch B HL/SL I & II

French B HL/SL I & II

Spanish B SL I & II

Grade Levels: 11th and 12th

Prerequisites: A grade C or higher in the previous language course or equivalent, and/or placement test, and teacher recommendation.

Credit: 1 per year

The IB Language B program is a foreign language-learning program designed for study at both Higher and Standard Levels by students with previous experience in learning the language. The main focus is on language acquisition and development. The program meets the needs of IB students who have already studied the target language for between three to five years immediately prior to the beginning of their IB course. However, a highly motivated and exceptional student, especially if he/she can arrange to study in a country where the language is spoken over the summer, may also be able to follow the Language B course at Standard Level following two years of classroom study. In addition, a motivated, capable language student with limited or no previous learning experience of the target language, may be able to follow the Dutch B course at Standard Level since we are living in The Netherlands.

The IB Language B program is communicative in that it focuses principally on interaction between speakers and writers of the target language. The main aim of the program is to prepare the learner to use the language appropriately in a range of situations and contexts and for a variety of purposes.

The skills of listening, speaking, reading and writing are taught and developed through the study of a wide range of oral and written texts of different styles and registers. Equal emphasis is given to the teaching of these four skills. The continuous assessment of oral work is integrated into regular classroom activities. The teaching of an appropriate range of grammatical structures is also integrated as far as possible with the study of themes and texts and the acquisition of skills. Authentic materials, such as television, films, documentaries, newspapers and magazines (as well as literary texts for HL), are used wherever possible and students are given maximum exposure to the target language.

For more information regarding the specific texts used in each class, please contact the instructor or IB Coordinator.

IB SOCIAL STUDIES COURSES

IB History I and II SL/HL

Grade Level: 11th and 12th

Prerequisite: 10th grade Modern World History or equivalent

Credit: 1 per year

The IB History course involves a study of various topics in depth from the 20th century. Students should become aware that historical accounts involve judgments based on qualitative evidence, and that these judgments might be revised. The student will be encouraged to reflect on the role of the historian and to examine whether the historian records history or creates it, and whether or not bias is desirable in the interpretation and recording of history. Thus, students will learn how to examine and understand documents, write analytical essays and compare and contrast global situations. The latter helps to foster respect and understanding of people and events in cultures different from their own.

Paper 1 Document Exam: Students study a prescribed topic: The USSR under Stalin, 1924 to 1941

Paper 2 Essay Exam on 20th Century World History: Students must write two essays each chosen from a different topic. At AISR we address (to a varying degree of depth and breadth) the following topics:

Topic 1 – Causes Practices and Effects of War

Topic 3 – The Rise and Rule of Single-Party States

Topic 4 – Peace and Cooperation: International Organizations and Multiparty States

Topic 5 – The Cold War

Paper 3 Regional Option: Students who wish to take IB History at the Higher Level also take a Paper 3 Essay exam in which they must answer three out of 25 questions on the history of a at least 100 years of a particular region beginning with 1750. At AISR we teach the history of Europe (including Russia/USSR), focusing on the last 100 years.

Internal Assessment: Both HL and SL students produce an historical investigation that is graded by the AISR teacher but moderated by the IB. The Internal Assessment is an integral part of the history course as it enables candidates to demonstrate the application of their skills and knowledge in history and to pursue their personal interests without the time constraints associated with written examinations.

Texts and Sources: AISR has compiled an impressive collection of primary and secondary sources in a variety of formats. IB History students use a variety of sources for each unit within the two-year course.

IB SCIENCE COURSES

IB Physics SL I and II

Grade Levels: 11th and 12th

Prerequisite: C+ or better in Algebra II, teacher recommendation

Credit: 1 per year

Physics is the study of the interactions of matter and energy. A goal is to use a small number of basic concepts, equations and assumptions to describe our physical universe. Once the descriptions are in place, the principles involved can be used to make predictions about a broad range of natural phenomena, ranging from the very common to the enormously obscure.

Topics: Vector Analysis, Graphical Analysis of Motion, Uniformly Accelerated Motion, Projectile and 2-dimensional Motion, Newtonian Mechanics & Forces, Work, Energy, Power Relationships, Conservation of Momentum, Thermodynamics and Heat Transfer, Wave Mechanics, Sound and Light, Electrostatics, Basic DC Electrical Circuits, Nuclear Physics, and Quantum Mechanics.

Text: *Physics*, Giancoli, Prentice Hall, 2002.

IB Biology SL/HL I

Grade Levels: 11th and 12th

Prerequisite: Teacher recommendation, or IB diploma/certificate candidate

Credit: 1 per year

This course follows the International Baccalaureate Organization's *Biology* curriculum, and is offered at the Standard and Higher Levels. One of the experimental sciences within the IB program, Biology is the study of living organisms and systems. The course involves the study of a comprehensive set of biological themes and topics, as well as a practical scheme of work. The material is similar to that found in introductory biology courses at the university level. It is a thorough investigation of biological concepts, including cells, the chemistry of life, genetics, ecology and evolution, human health and physiology, and plant science. Emphasis is placed on laboratory investigations and interpretations, with assessment given by the instructor and the IB Organization.

Texts: *Biology: Concepts and Connections, 4th Edition*, Campbell, Reece, Mitchell, and Taylor. Addison Wesley, 2003. *Biology, 2nd Edition*, Weem. IBID Press, 2001. *Biology Guide*. International Baccalaureate Organization, 2001.

IB Biology SL/HL II

Grade Level: 12th

Prerequisite: IB Biology: Year One

Credit: 1 per year

This course is a continuation of the topics studied in IB Biology: Year One. The latter part of the second semester is devoted to reviewing for the IB Biology tests, taken in May.

Texts: *Biology: Concepts and Connections, 4th Edition*, Campbell, Reece, Mitchell, and Taylor. Addison Wesley, 2003. *Biology, 2nd Edition*, Weem. IBID Press, 2001. *Biology Guide*. International Baccalaureate Organization, 2001.

IB MATHS COURSES

IB Mathematical Studies I and II (SL)

Grade Levels: 11th and 12th

Prerequisite: Grade of C or higher in Algebra I, Geometry, teacher recommendation

Credit: 1 credit per year

This two-year course, under the auspices of the International Baccalaureate Program, is designed for students who do not anticipate needing mathematics in their future studies at college or university. Students taking this course need to be already equipped with fundamental skills and a rudimentary knowledge of basic processes.

The core part of the syllabus includes number sets and algebra, logic, probability, functions, geometry and trigonometry, statistics, financial mathematics, and introductory differential calculus. Students will also be required to use a graphing calculator to solve various types of problems.

Textbooks: *Mathematics for the International Student: Mathematical Studies SL*, Haese and Harris Pub. *Mathematical Ideas*, Miller, Hearan, Hornsky. Various supplemental texts are also used.

IB Mathematics Standard I and II (SL)

Grade Levels: 11th and 12th

Prerequisite: C, or higher, in Algebra II and Geometry, Recommendation of teacher

Credit: 1 credit per year

Mathematics Standard Level is suited to those students who have knowledge of basic mathematical concepts and who have the skills needed to apply simple mathematical techniques correctly. Most of these students will need a sound mathematical background to study subjects such as chemistry, economics, psychology or business administration.

Math SL does not have the depth of the HL course, but does include the important concepts from many of the same topics. Although Math SL is not considered to be as rigorous as HL, students can expect to spend considerable time and effort on assignments to gain the full understanding required to successfully complete this course. These topics are covered in the course - Algebra, Functions and Equations, Circular Functions and Trigonometry, Matrices, Vectors, Statistics and Probability, Calculus.

An optional topic is not included in the Math SL syllabus; however, students will have the opportunity to develop the skills they need to communicate mathematical ideas by completing two portfolio assignments representing mathematical investigation and mathematical modeling.

Text: Various texts will be used as resources for the topics studied. Some titles included are: *Mathematics SL*, Haese and Harris Pub. *Advanced Mathematics*, Brown; *Calculus, An Applied Approach*, Larson and Edwards.

IB Mathematics I and II (HL)

Grade levels: 11th and 12th

Prerequisite: B+ in Algebra and Geometry, Recommendation of teacher

Credit: 1 per year

Mathematics Higher Level is designed for those students who have a very good background in mathematics, who are competent in analytical and technical skills, and who have a high level of interest in mathematics. Most of these students will study mathematics, or closely related subjects such as physics or engineering, in university.

Math HL is a rigorous and demanding course, requiring students to study a broad range of topics through a number of different approaches and to varying degrees of depth. The core syllabus consists of seven topics list as follows: Algebra, Functions and Equations, Circular Functions and Trigonometry, Matrices, Vectors, Statistics and Probability, and Calculus.

One optional topic is also required, to be chosen from the following four topics:

Statistics and Probability, Sets, Relations and Groups, Series and Differential Equations and Discrete Mathematics.

There is also an internally assessed portion composed of two portfolio assignments representing mathematical investigation and mathematical modeling.

Text: Various resources are used throughout the two-year course. Some representative titles include *Precalculus*, Larson/Hostetler; *Advanced Mathematics*, Brown; *Calculus*, Finney, Demana, Waits, and Kennedy; *Calculus I*, Larson, Hostetler and Edwards; *Pure Maths*, R.C. Solomon; *Pure Mathematics I*, Emanuel, *Mathematics HL*, Haese and Harris, Pub.

IB ELECTIVE COURSES
IB Information Technology in a Global Society
Visual Arts

ITGS - HL I and II

Grade Levels: 11th and 12th

Prerequisites: Students should have basic keyboard and word processing skills. Good reading and writing skills are essential.

Credit: 1 per year

Easy access to vast amounts of information and very rapid exchanges of information has profoundly affected how individuals, and groups of individuals, work, play, develop relationships and evolve ethical behavior. The rapid advances in technology have plunged people into an information age. Accordingly, the focus of ITGS is the Information Age and the challenges that face us.

ITGS is a program that aims to prepare students to understand the uses of information systems, evaluate the ethical and social consequences of technologies on society, and predict future change.

The subject covers three main topic areas:

- *Social and Ethical Issues* where students analyze the social impact and ethical considerations of IT
- *IT systems in a Social Context* where students study issues relating to the use of software, hardware and related information systems
- *Areas of Impact* that provide the topic areas for case studies. The *Areas of Impact* are: Business and employment; Education; Health; Arts, entertainment and leisure; Science and the environment; Politics and government.

Internal Assessment – 20%

The Portfolio and extension is externally moderated. It includes:

- Three pieces of written work, each of 800 -1000 words, which critically analyze and evaluate social and ethical issues raised in news items
- An extension which includes an interview to investigate an issue raised in one of these pieces

External Assessment – 80%

- Paper 1 (1 hour) – 4 short-answer questions (20%)
- Paper 2 (2 hours) – three structured questions from a choice of four on areas of impact (35%)
- Paper 3 (1 hour) – three questions based on a case study (25%)

IB VISUAL ARTS

IB Visual Arts SL/HL I and II

Grade Levels: 11th and 12th

Prerequisite: Teacher recommendation, or IB certificate/diploma candidate

Credit: 1 per year

The IB Art program covers two years of intensive and experimental work by students in the 11th and 12th grade. It is not purely practical but involves research into art and artists, and students must be prepared to work on art projects both in school and out, visiting galleries and gaining information and inspiration at all times and from all sources. An integral part of the IB Art course is the student Research Workbook: this is a journal kept by the student and into which regular entries might be put, to do with research, ideas for artwork, sketches, notes etc.

The Research Workbook is closely linked to (and often provides the background for students' practical work.) The practical work can take the form of paintings, prints, drawings, collages, 3D constructions etc, and will form the basis of the student IB Art Exhibition that is held in April of the 2nd year. The exhibition is the opportunity for the student to show what he or she has been working on for the previous two years. The IB Art examination also takes place at this exhibition. This takes the form of a private interview with a visiting Art Examiner (who will ask the student about the work on display).

In order to do well at IB Art, a student must be motivated and have an inquiring mind. Technical ability is useful but is not a guarantee of success. The IB Art student should be open-minded, willing to work hard, interested in visual experimentation and have something to say.

11th grade

The first year provides the student with the opportunity to explore different media and techniques.

The course deliberately includes opportunities both for structured learning of the values of color, tone, form, design etc. and for wide-ranging personal research of a more experimental nature.

12th grade

For the final year of the course it is anticipated that students follow their own individual artistic journey rather than respond to teacher-provided assignments. The emphasis is on personal interpretation and individual artistic statements.